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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/427,386	10/25/1999	KENNETH W. BAUN	12187-12	3103

7590 05/31/2002

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EXAMINER

WINSTEDT, JENNIFER E

#10

ART UNIT PAPER NUMBER

2872

DATE MAILED: 05/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/427,386

Applicant(s)

BAUN ET AL.

Examiner

Jennifer E Winstedt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-88 is/are pending in the application.
- 4a) Of the above claim(s) 47-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 55-88 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 47-54 have been withdrawn from consideration.

Claim Objections

2. Claims 59, 60, and 65 are objected to because of the following informalities:

It appears that claim 59 should be dependent on claim 55, not claim 54. Claim 54 is directed to a mount while claim 59 is directed to a telescope system same as claim 55. Also, claim 54 has been withdrawn from consideration. Since claim 60 is dependent on claim 59, it inherits this objection. (For the following rejections, claim 59 is taken as dependent on claim 55.)

Claim 65 recites the limitation "the position register" in lines 2 and 3 of the claim. There is insufficient antecedent basis for this limitation in the claim. Claim 65 is dependent on claim 64 which is dependent on claim 63 which is dependent on claim 61. The position register is recited in claim 62, not 61, 63 or 64.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 61 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gagnon (U.S. Patent 4,764,881) in view of Bigler et al. (U.S. Patent 5,912,541).

4. Regarding claims 61 and 63 Gagnon discloses an automated telescope system of the type including a telescope mounted for rotation about an altitude and an azimuth axis, the automated telescope system comprising a command processor (40, Figure 3 and column 3, line 52), the command processor receiving an input representing a position of a desired viewing object (column 5, lines 54-55), the position characterized in terms of a celestial coordinate system (column 3, line 66 - column 4, line 1 and column 6, line 29), the command processor translating the input into a position characterized in terms of an altitude/azimuth coordinate system (column 6, lines 55-56), the command processor calculating an amount of movement about each axis, to move the telescope from a present position to a desired position which points the telescope at the desired viewing object (column 6, lines 55-56), the command processor outputting motor movement commands for each respective axis (column 6, lines 56-58); and two motor portions, each coupled to rotate the telescope about a respective one of the axes (28, 36, Figures 1-3), each motor portion including a motor having a rotatable shaft (column 3, lines 27-28 and 41-42). Gagnon does not disclose each motor portion having a motion indicator coupled to the motor, the motion indicator developing motion indication signals corresponding to actual motor movement and an intelligent motor control processor, coupled to the motor and the motion indicator, the motor control processor further coupled to receive motor movement commands from the command processor, the motor control processor processing each respective motor movement command into motor control commands defining operational movement of the motor, the motor control processor further receiving motion indication signals and comparing actual operation

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movement of its respective motor to commanded operational movement, the motor control processor modifying motor control commands in response to differences therebetween; wherein the motion indicator comprises an incremental encoder, the motion indication signals corresponding to increments of the encoder, a timing between the increments corresponding to a speed of movement and an amount of increments corresponding an actual extent of movement.

Bigler et al. discloses motor portions (column 5, lines 37-39), each motor portion includes a motion indicator coupled to a motor (67, Figures 2A and 2B and column 3, lines 49-57), the motion indicator developing motion indication signals corresponding to actual motor movement (column 3, lines 49-57) and an intelligent motor control processor, coupled to the motor and the motion indicator (50, Figure 1), the motor control processor further coupled to receive motor movement commands from a command processor, the motor control processor processing each respective motor movement command into motor control commands defining operational movement of the motor (column 6, lines 5-8), the motor control processor further receiving motion indication signals and comparing actual operational movement of its respective motor to commanded operation movement, the motor control processor modifying motor control commands in response to difference therebetween (column 3, lines 34-41 and column 6, lines 5-8); wherein the motion indicator comprises an incremental encoder (column 3, lines 55-57), the motion indication signals corresponding to increments of the encoder, a timing between the increments corresponding to a speed of movement and an amount of increments corresponding an actual extent of movement (inherent in increment encoders). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the motor portions of Gagnon include a motion indicator and an intelligent motor control processor as Bigler et al.

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suggests in order to achieve extremely fine resolution for photographing a star (column 6, lines 14-19; Bigler et al.).

5. Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gagnon in view of Bigler et al. as applied to claims 61 and 63 above, and further in view of Harris et al. (U.S. Patent 4,074,128).

Regarding claim 64, Gagnon in view of Bigler et al. discloses that the increment incoder comprises an optical encoder (column 3 lines 53-55; Bigler et al.). Gagnon in view of Bigler et al. does not disclose the optical encoder operating in quadrature, the motor control processor processing the quadrature signal to determine motor speed and motor rotation direction. Harris et al. discloses an optical encoder operating in quadrature (1-7, Figure 1 and column 2, lines 49-52), and a control that processes the quadrature signal to determine motor speed and motor rotation direction (11, Figure 1 and column 3, line 63 – column 4, line 13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the optical encoder of Gagnon in view of Bigler et al. operate in quadrature and to have the motor control processor of Gagnon in view of Bigler et al. process the quadrature signal to determine motor speed and motor rotation direction as Harris et al. suggests in order to make knowing how fast and in what direction the telescope is moving possible.

Double Patenting

6. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

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A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

7. Claims 55-60, 62, 70, 75, 76, and 78-80 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-7, 14, and 19-23 of prior U.S. Patent No. 6,304,376. This is a double patenting rejection.

8. Claims 55-60, 62, 70, 75, 76, and 78-80 are directed to the same invention as that of claims 1-7, 14, and 19-23 of commonly assigned U.S. Patent No. 6,304,376. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 61, 63-69, 71-74, 77, and 81-88 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of U.S. Patent No. 6,304,376. Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the limitations recited in the claims of the application are also recited in the claims of U.S. Patent No. 6,304,376.

Response to Arguments

11. Applicant's arguments with respect to claims 55-88 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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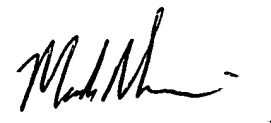
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer E Winstedt whose telephone number is (703) 305-0577. The examiner can normally be reached on 8:30-18:00 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on (703) 308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JW
May 21, 2002



PRIMARY EXAMINER
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